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Educational inequality during primary school

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Abstract

By using school history, we want to answer the question, how institutional conditions and one's social background have an impact on students receiving different educational tracks at fifths grade. These impacts could be explained by the theories of Boudon (1974) and Bourdieu (1983). Therefore one can assume that structural characteristics of the pupils' social background (e.g. low capital of the family) as well as radical changes during primary school (e.g. relocation) have a negative impact on their school career. This paper presents analyses using data from the National Educational Panel Study (NEPS).

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1. Introduction

A central theme in educational research focuses on social inequality concerning educational success and educational participation as well as educational decisions. It is a known fact that family background has a huge impact on these areas. Nevertheless there is a lack of findings based on longitudinal data with a sufficient large number of participants.

By using data from the National Educations Panel Study (NEPS) we want to answer the following questions: Is it not only the pupils' social background that has an impact on one's school career? Is there more? Do radical changes like moving to another city during primary school lower the changes of receiving a recommendation for higher secondary school (Gymnasium)? And what about repeating or skipping a class? Are students who repeated a class less likely to reach a higher educational track? Does it matter when a student repeated a class?

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The analyses, presented in this paper are based on data from NEPS and will focus on educational careers at fifth grade. As a starting point, retrospective data will be used to explore the students' school history.

2. Theoretical Background

Generally accepted is the fact that educational decisions and transitions in particular (such as from primary school to secondary school) are of exceptional importance for educational careers. The research in this area is essentially based on the works of Raymond Boudon and Pierre Bourdieu.

According to Boudon (1974) two effects can cause educational inequality: primary effects on the one hand and secondary effects on the other hand. Primary effects explain differences in educational performances and educational success between students due to differences between social groups (e.g. based on the family background. Secondary effects explain different choices made by different social groups. This means, even if students have similar school performances, the possibility of going to a higher educational school is higher for students with an advantaged family background than for those living under less advantaged circumstances.

Bourdieu (1989) argues similarly. According to him each individual occupies a social status, which links to one's social class. Furthermore one's social class depends on the availability of cultural, economic, social and symbolic capital. Thus social inequality (and therefore educational inequality) is reproduced through the unequal equipment of each individual's capital.

Due to both theories we can assume that students with an advantaged family background are more likely to reach good school performances such as good grades and therefore are less likely to repeat a class (and more likely to skip a class). Furthermore they should receive recommendations for higher secondary education and attend them.

In addition, if a student gets confronted with radical changes during primary school like changing a class because of relocation, there could be a negative effect on his or her school performance. Eventually, we suppose that relocation decreases the probability of achieving such a recommendation for higher secondary school and attending this school type.

3. Data and Sample

This paper uses data from the National Educational Panel Study (NEPS), which holds data from students (the target person), their parents, teachers and even the head of school (of the school they are attending) as well as competence tests (Blossfeld, Roßbach, & von Maurice, 2011). The first wave which is used here relies on information of students at fifth grade which include, next to basic information like gender or age, further information such as the school type they are attending. Furthermore, information given by the students' parents is included in the database. With their help we can get useful facts about the school history of the fifth graders (e.g. repeating or skipping a class, change of domicile) or the family background (e.g. monthly household income). Some information is even given by both, parents and students (e.g. repeating a class).

The original database holds 6,112 students (and 4,786 parents) which were recruited, but there are 334 (605) temporary dropouts. Therefore 5,778 students and 4,181 parents participated in wave 1. This was in fall of 2010 when the students were at the beginning of fifth grade. We kept only the cases from those with information from both, students and their parents. For regression analyses students attending special needs schools, primary schools or comprehensive schools had to be excluded. Therefore the final sample is N = 3,846. Due to this, students going to higher secondary school are slightly overrepresented in this sample (compared to the original database).

4. Findings

4.1. Descriptive Statistics

At first, some descriptive statistics are shown to get an overview of the data. According to figure 1, one can see that most students (44.2%) go to higher secondary school (Gymnasium) at fifths grade. On the contrary,

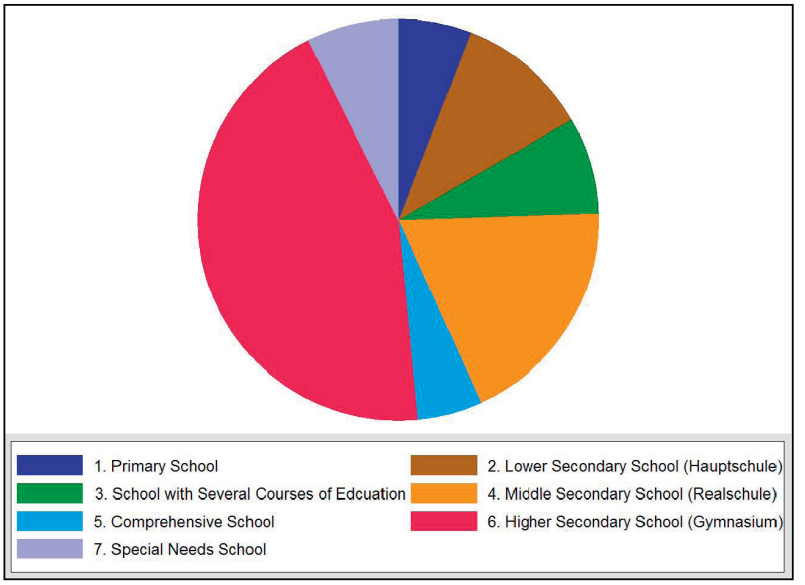

Figure 1. School type at fifths grade

about 10.8% go to lower secondary school (Hauptschule) and another 7.4% attend special need schools. Due to specific federal specifications even 5.9% are still going to primary school. If the original database of N = 6,112 would have been used, the outcomes would change a little. In this case only 39.5% of students are attending a higher secondary school and more students (12.2%) studying at lower secondary school.

Table 1. Repeating a class during primary school

Repeating a class	N	%
1. class	118	30.33
2. class	98	25.19
3. class	87	22.37
4. class	36	9.25
5. class	50	12.86
Total	389	100.00

As stated by students about 12% repeated a class during their school career, and 9% repeated a school year based on parents' answers. There are some gender differences, 11.6% of the boys and 8.2% of the girls repeated a school year. By taking a deeper look at table 1, one can see that students repeat mostly their first school year if they repeated a school year at all. The risk of repeating a class decreases during primary school (from class one to four) and increases up to 13% when entering secondary school. Table 1 includes students attending special needs schools. If we drop them, then only 287 instead of 389 students repeated a school year.

Table 2. Skipping a class during primary school

Skipping a class	N	%
1. class	8	11.94
2. class	29	43.28
3. class	17	25.37
4. class	13	19.41
Total	67	100.00

Based on parents answers 1.5% of all students skipped a class during primary school. Table 2 shows that most students, if skipped a class at all, skipped their second one. Fifths class sippers are of course not included, because they would attend sixths grade right know and are therefore not included in the database.

Table 3. Recommendation and school type

	School type higher secondary school		
Recommendation for higher secondary school	No	Yes	Total
No	989	157	1,146
	86.30	13.70	100.00
	83.81	9.24	39.79
Yes	191	1,543	1,734
	11.01	88.99	100.00
	16.19	90.76	60.21
Total	1,180	1,700	2,880
	40.97	59.03	100.00
	100.00	100.00	100.00

Table 3 represents the contingency between a recommendation for higher secondary school (Gymnasium) and the actual attendance of a higher secondary school (students going to primary school, comprehensive school or special needs school are not included). Both variables are strongly correlated and highly significant ($r = .749$, $p = .00$). If one receives a recommendation for higher secondary school 89% follows it. 91% of all students' going to higher secondary obtains such a recommendation. Similar numbers are shown for students not going to higher secondary school. 86% follow the recommendation given by their primary teacher.

4.2. Analyses

To answer what decreases or increases the possibility of the transition from primary school to higher secondary school (Gymnasium) at fifths grade, we used stepwise logistic regression analyses. Due to similar findings this paper only contains higher secondary school as the depending variable (table 4). Findings regarding recommendation for higher secondary school as the depending variable are explained in the text but are not presented separately.

First of all we put two variables as indicators for school success in our model. Table 4 shows that a recommendation for higher secondary school significantly increases the chance of going to such a school type. Moreover, the worse the overall average grades of a student (in mathematics and German, grades from 1 to 6) the least likely that one is going to higher secondary school at fifths grade. Both variables stay highly significant in all three models.

The second model included students' relocation and repeating a class during primary school. A change of domicile doesn't have a significant effect on recommendation or attending higher secondary education, though correlations have shown that these variable highly significant correlate with each other. Repeating a class and receiving a recommendation for higher secondary education are weakly negatively correlated but highly significant ($r = -.232$, $p = .00$). If a student repeated a class during primary school (first to fourth class) it significantly lowers his or her chance of receiving a recommendation for higher secondary school. By taking a deeper look at each class, we can assume that this result is only significant if someone repeated the first class (not shown in the table). Skipping a class (not in the table) and recommendation as well as attending higher secondary school correlate significantly high with each other but don't have a significant impact in the model. This could be explained due to the small sample.

Table 4. Prediction of higher secondary school

	Variable	OR	Pseudo-R^2	N
Step 1	Recommendation for higher secondary school	23.21***	.48***	2567
	Overall average grade in math and German	.32***		
Step 2	Recommendation for higher secondary school	22.59***	.49***	2528
	Overall average grade in math and German	.32***		
	Relocation	.99		
	Repeating a class during primary school	.54*		
Step 3	Recommendation for higher secondary school	21.95***	.49***	2506
	Overall average grade in math and German	.33***		
	Relocation	.10		
	Repeating a class during primary school	.54*		
	Judgment of economic household situation	1.18**		
	Gender	1.18		

*** p <= .01; ** p <= .05; * p <= .10

The master model (step 3) included information about the family background. In comparison with the monthly household income the parents' judgment of their economic household situation is a better predictor for

recommendation as well as going to higher secondary school. Because of that, we used the economic judgment variable instead of the monthly household income. It states that the higher one judges his or her economic household situation the better the chances for students' receiving a recommendation for higher secondary education and attending the recommended school type. The control variable gender doesn't have an impact on the depending variable as well as the recommendation given by a primary teacher.

5. Summary

Altogether we can confirm that primary and secondary effects increase educational success and therefore reproduce educational inequality. As anticipated, the recommendation for a higher secondary school and the students' grades are good predictors for attending such kind of school. Contrary to our expectations, a change of domicile during primary school doesn't influence someone's school career.

Besides, we had a closer look at the economical capital of the students' family. Our findings proofed that judging one's economic household situation is a better predictor for higher school recommendations than one's monthly household income. We considered, that a monthly household income doesn't represent one's socioeconomic status as adequate the judgment of one's financial situation. Because how poor or rich somebody feels does not only depend on his income. Furthermore, it depends on additional criteria such as regional conditions. If someone lives in an area with high rental prices he possibly feels not as rich as someone living in an area where there a cheap rental prices even if both have the same monthly income. We should take this in consideration for further analyses.

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References

Blossfeld, H.-P., Roßbach, H.-G., & von Maurice, J. (2011). Education as a Lifelong Process – The German National Educational Panel Study (NEPS). Zeitschrift für Erziehungswissenschaft, Special Issue 14.

Boudon, R. (1974). *Education, Opportunity, and Social Inequality. Changing Prospects in Western Society*. New York: Wiley.

Bourdieu, P. (1983) Ökonomische Kapital, kulturelles Kapital, soziales Kapital. In R. Kreckel (Eds.), *Soziale Ungleichheiten* (pp. 183-198). Göttingen: Schwartz.